

CUMULATIVE INDEXES

CONTRIBUTING AUTHORS, VOLUMES 49-53

- Adelberg EA, 52:1-40
Aerne BL, 51:125-49
Ahmad SI, 52:591-625
Altendorf K, 50:791-824
Andrews JH, 52:105-26
Andrews NW, 49:175-200
Appleman JA, 50:645-77
Archelas A, 51:491-525
Armstrong G, 51:629-59
Arvin AM, 50:59-100
- Bartlett MS, 50:645-77
Battista JR, 51:203-24
Bauer CE, 53:495-523
Baumann L, 49:55-94
Baumann P, 49:55-94
Belay ED, 53:283-314
Ben-Jacob E, 52:779-806
Bennett JW, 53:411-46
Bentley R, 53:411-46
Bergstrom JD, 49:607-39
Bierbaum G, 52:41-79
Bills GF, 49:607-39
Bird TH, 53:495-523
Blair DF, 49:489-522
Bobik TA, 50:137-81
Boemare N, 51:47-72
Borst P, 49:427-60;
52:745-78
Branton PE, 53:577-628
Breeuwer JAJ, 53:71-102
Brock TD, 49:1-28
Brown BA, 52:453-90
Buchanan RJ Jr, 52:423-52
Burleigh BA, 49:175-200
Byrne K, 49:607-39
- Caldwell DE, 49:711-45
Casey WM, 49:95-116
- Chandler M, 53:245-81
Chiang SL, 53:129-54
Churchward GG, 49:367-97
Clark MA, 49:55-94
Cohen I, 52:779-806
Condemine G, 50:213-57
Costerton JW, 49:711-45
Cozzone AJ, 52:127-64
- Dean DR, 49:335-66
Deckers-Hebestreit G,
50:791-824
de Jong E, 51:375-414
de Lorenzo V, 51:593-628
DeLuca NA, 49:675-710
Dijkstra BW, 53:315-51
DiMaio D, 52:397-421
Dobbelaere D, 53:1-42
Domingo E, 51:151-78
Dowds B, 51:47-72
Draths KM, 49:557-79
Dubnau D, 53:217-44
Dufresne C, 49:607-39
Duncan K, 49:641-73
Dunny GM, 51:527-64
Dybvig K, 50:25-57
- Eisenstark A, 52:591-625
Elsen S, 53:495-523
Engelberg-Kulka H, 53:43-70
Englund PT, 49:117-43
Estes MK, 49:461-87
- Fairlamb AH, 52:745-78
Fauci AS, 50:825-54
Ferry JG, 49:305-33
Field JA, 51:375-414
Fink DJ, 49:675-710
Fisher K, 49:335-66
- Forst S, 51:47-72
Foster JW, 49:145-74
Francis SE, 51:97-123
Frost JW, 49:557-79
Fujii I, 49:201-38
Fuqua C, 50:727-51
Furstoss R, 51:491-525
- Gaal T, 50:645-77
Ge Z, 53:353-87
Gershon AA, 50:59-100
Gillin FD, 50:679-705
Glaser G, 53:43-70
Glorioso JC, 49:675-710
Goldberg DE, 51:97-123
Golden SS, 53:389-409
Goldhar J, 49:239-76
Gosink JJ, 53:189-215
Gourse RL, 50:645-77
Greenberg EP, 50:727-51
Griffin DE, 51:565-92
Griffith DE, 52:453-90
Guarente L, 52:533-60
Gull K, 53:629-55
Gutnick DL, 52:779-806
- Hardwick JM, 51:565-92
Haren L, 53:245-81
Harwood CS, 50:553-90
Hernandez-Pando R,
50:259-84
Heussler V, 53:1-42
Holden DW, 53:129-54
Holland JJ, 51:151-78
Howard RJ, 50:491-512
Hughes KT, 52:231-86
Hugouvieux-Cotte-Pattat N,
50:213-57
Hurst GDD, 53:71-102

- Hutchinson CR, 49:201-38
- Jaeger K-E, 53:315-51
- Jannasch HW, 51:1-45
- Jerris RC, 50:707-25
- Johnson CH, 53:389-409
- Johnson EA, 53:551-75
- Johnson MS, 53:103-28
- Johnston LH, 51:125-49
- Joiner KA, 51:415-62
- Kasamatsu H, 52:627-86
- Keisari Y, 49:239-76
- Kirk SH, 52:591-625
- Klein O, 52:397-421
- Klier CM, 50:513-52
- Koch AL, 50:317-48
- Kolenbrander PE, 50:513-52
- Korber DR, 49:711-45
- Lai C-C, 52:397-421
- Lai C-Y, 49:55-94
- Lamm ME, 51:311-40
- Lang-Unnasch N, 52:561-90
- Lappin-Scott HM, 49:711-45
- Lawrence JG, 50:137-81
- Lee MD, 52:423-52
- Lee MGS, 51:463-89
- Leonard BAB, 51:527-64
- Leschine SB, 49:399-426
- Lewandowski Z, 49:711-45
- Lin R, 49:747-75
- Madden K, 52:687-744
- Malim MH, 52:491-532
- Mancinelli RL, 49:581-605
- Marasco W, 51:257-83
- Marcellus RC, 53:577-628
- Marqués S, 51:341-73
- Marzluf GA, 51:73-96
- Mathee K, 52:231-86
- McCaffery JM, 50:679-705
- McGarvey GJ, 51:285-310
- Meijer WG, 52:191-230
- Meints RH, 53:447-94
- Mekalanos JJ, 53:129-54
- Melnick JL, 49:461-87; 50:1-24
- Metcalfe TG, 49:461-87
- Miller JH, 50:625-43
- Miller KJ, 50:101-36
- Mills K, 52:533-60
- Missiakas D, 51:179-202
- Mor A, 49:277-304
- Moran NA, 49:55-94
- Morgan BA, 51:125-49
- Murphy AD, 52:561-90
- Nakanishi A, 52:627-86
- Nakano MM, 52:165-90
- Nallin-Omstead M, 49:607-39
- Nasser W, 50:213-57
- Newman EB, 49:747-75
- Nicolas P, 49:277-304
- Odom JM, 52:423-52
- Ofek I, 49:239-76
- Ouellette M, 49:427-60
- Pantaleo G, 50:825-54
- Parales RE, 50:553-90
- Parks LW, 49:95-116
- Patel RN, 52:361-95
- Pérez-Martín J, 51:593-628
- Persing DH, 50:349-73
- Peters JW, 49:335-66
- Phung LT, 50:753-89
- Pollard VW, 52:491-532
- Raina S, 51:179-202
- Ramig RF, 51:225-55
- Ramos JL, 51:341-73
- Reetz MT, 53:315-51
- Regnery RL, 50:707-25
- Reineke W, 52:287-331
- Reiner DS, 50:679-705
- Reverchon S, 50:213-57
- Roberts IS, 50:285-315
- Roessner CA, 50:467-90
- Rondon I, 51:257-83
- Rood JJ, 52:333-60
- Rook GAW, 50:259-84
- Ross W, 50:645-705
- Roth JR, 50:137-81
- Rouhbakhsh D, 49:55-94
- Roulston A, 53:577-628
- Ruby EG, 50:591-624
- Sahl H-G, 52:41-79
- Scott AI, 50:467-90
- Scott JR, 49:367-97
- Setlow P, 49:29-54
- Shapiro JA, 52:81-104
- Shapiro TA, 49:117-43
- Sharon N, 49:239-76
- Shimizu Y, 50:431-65
- Shimkets LJ, 53:525-49
- Shively JM, 52:191-230
- Silver S, 50:753-89
- Sinai AP, 51:415-62
- Sinclair D, 52:533-60
- Smith AE, 49:807-38
- Snyder M, 52:687-744
- Spain JC, 49:523-55
- Spector MP, 49:145-74
- Stackebrandt E, 51:47-72
- Staley JT, 53:189-215
- Stouthamer R, 53:71-102
- Sullivan DJ, 51:97-123
- Takayama S, 51:285-310
- Taylor BL, 53:103-28
- Taylor DE, 53:353-87
- Tibayrenc M, 50:401-29
- Timmis KN, 51:341-73
- Ton-Hoang B, 53:245-81
- Toone WM, 51:125-49
- Valent B, 50:491-512
- Van der Ploeg L, 51:463-89
- Van Etten JL, 53:447-94
- van Keulen G, 52:191-230
- van Pée K-H, 50:375-99
- Voelker LL, 50:25-57

Wallace RJ Jr, 52:453-90
Warren RAJ, 50:183-212
Weinrauch Y, 53:155-87
Whelen AC, 50:349-73
Whittaker CJ, 50:513-52

Winans SC, 50:727-51
Wong C, 51:285-310
Wood JM, 50:101-36
Yayanos AA, 49:777-805

Young DB, 49:641-73
Zhulin IB, 53:103-28
Zuber P, 52:165-90
Zychlinski A, 53:155-87



CHAPTER TITLES, VOLUMES 49-53

Prefatory Chapters

The Road to Yellowstone—and Beyond	TD Brock	49:1-28
My Role in the Discovery and Classification of the Enteroviruses	JL Melnick	50:1-24
Small is Powerful: Recollections of a Microbiologist and Oceanographer	HW Jannasch	51:1-45
The Right Place at the Right Time	EA Adelberg	52:1-40

Animal Pathogens and Diseases

Peptides as Weapons Against Microorganisms in the Chemical Defense System of Vertebrates	P Nicolas, A Mor	49:277-304
New Mechanisms of Drug Resistance in Parasitic Protozoa	P Borst, M Ouellette	49:427-60
Prospects for New Interventions in the Treatment and Prevention of Mycobacterial Disease	DB Young, K Duncan	49:641-73
Transformation of Leukocytes by <i>Theileria parva</i> and <i>T. annulata</i>	D Dobbelaere, V Heussler	53:1-42
Addiction Modules and Programmed Cell Death and Antideath in Bacterial Cultures	H Engelberg-Kulka, G Glaser	53:43-70
<i>Wolbachia pipientis</i> : Microbial Manipulator of Arthropod Reproduction	R Stouthamer, JAJ Breeuwer, GDD Hurst	53:71-102
Aerotaxis and Other Energy-Sensing Behavior in Bacteria	BL Taylor, IB Zhulin, MS Johnson	53:103-28
In Vivo Genetic Analysis of Bacterial Virulence	SL Chiang, JJ Mekalanos, DW Holden	53:129-54
The Induction of Apoptosis by Bacterial Pathogens	Y Weinrauch, A Zychlinski	53:155-87
Transmissible Spongiform Encephalopathies in Humans	ED Belay	53:283-314
Bacterial Biocatalysts: Molecular Biology, Three-Dimensional Structures, and Biotechnological Applications of Lipases	K-E Jaeger, BW Dijkstra, MT Reetz	53:315-51

Contributions of Genome Sequencing to Understanding the Biology of <i>Helicobacter pylori</i>	Z Ge, DE Taylor	53:353-87
Clostridial Toxins as Therapeutic Agents: Benefits of Nature's Most Toxic Proteins	EA Johnson	53:551-75
Viruses and Apoptosis	A Roulston, RC Marcellus, PE Branton	53:577-628
The Cytoskeleton of Trypanosomatid Parasites	K Gull	53:629-55
Applied Microbiology and Ecology		
Cellulose Degradation in Anaerobic Environments	SB Leschine	49:399-426
Environmental Virology: From Detection of Virus in Sewage and Water by Isolation to Identification by Molecular Biology—A Trip Over 50 Years	TG Metcalf, JL Melnick, MK Estes JC Spain	49:461-87 49:523-55
Biodegradation of Nitroaromatic Compounds	JW Frost, KM Draths	49:557-79
Biocatalytic Syntheses of Aromatics from D-Glucose: Renewable Microbial Sources of Aromatic Compounds	RL Mancinelli	49:581-605
The Regulation of Methane Oxidation in Soil Microbial Biofilms	JW Costerton, Z Lewandowski, DE Caldwell, DR Korber, HM Lappin-Scott	49:711-45
Microbiology to 10,500 Meters in the Deep Sea	AA Yayanos	49:777-805
Regulation of Pectinolysis Genes in <i>Erwinia chrysanthemi</i>	N Hugouvieux-Cotte-Pattat, G Condemine, W Nasser, S Reverchon	50:213-57
The Role of Nucleic Acid Amplification and Detection in the Clinical Microbiology Laboratory	AC Whelen, DH Persing	50:349-73
Biosynthesis of Halogenated Metabolites by Bacteria	K-H van Pée	50:375-99
Microalgal Metabolites: A New Perspective	Y Shimizu	50:431-65
Genetically Engineered Synthesis of Natural Products: From Alkaloids to Corrins	CA Roessner, AI Scott	50:467-90
Mechanisms of Adhesion by Oral Bacteria	CJ Whittaker, CM Klier, PE Kolenbrander	50:513-52

Census and Consensus in Bacterial Ecosystems: The LuxR-LuxI Family of Quorum-Sensing Transcriptional Regulators	C Fuqua, SC Winans, EP Greenberg	50:727-51
Molecular Genetics of Sulfur Assimilation in Filamentous Fungi and Yeast	GA Marzluf	51:73-96
Microbial Aldolases and Transketolases: New Biocatalytic Approaches to Simple and Complex Sugars	S Takayama, GJ McGarvey, C Wong	51:285-310
Sulfur Tuft and Turkey Tail: Biosynthesis and Biodegradation of Organohalogens by Basidiomycetes	E de Jong, JA Field	51:375-414
Synthesis of Enantiopure Epoxides Through Biocatalytic Approaches	R Furstoss, A Archelas	51:491-525
Genetics of Eubacterial Carotenoid Biosynthesis: A Colorful Tale	G Armstrong	51:629-59
Lantibiotics: Biosynthesis and Biological Activities of Uniquely Modified Peptides from Gram-Positive Bacteria	H-G Sahl, G Bierbaum	52:41-79
Development of Hybrid Strains for the Mineralization of Chloroaromatics by Patchwork Assembly	W Reineke	52:287-331
New Perspectives on Microbial Dehalogenation of Chlorinated Solvents: Insights from the Field	MD Lee, JM Odom, RJ Buchanan Jr.	52:423-52
Constructing Polyketides: From Collie to Combinatorial Biosynthesis	R Bentley, JW Bennett	53:411-46

Chemotherapy and Chemotherapeutic Agents

Polyketide Synthase Gene Manipulation: A Structure-Function Approach in Engineering Novel Antibiotics	CR Hutchinson, I Fujii	49:201-38
Discovery, Biosynthesis, and Mechanism of Action of the Zaragozic Acids: Potent Inhibitors of Squalene Synthase	JD Bergstrom, C Dufresne, GF Bills, M Nallin-Omstead, K Byrne	49:607-39

Diversity and Systematics

Genetics, Physiology, and Evolutionary Relationships of the Genus <i>Buchnera</i> :

Intracellular Symbionts of Aphids	P Baumann, L Baumann, C-Y Lai, D Rouhbakhsh, NA Moran, MA Clark	49:55-94
Poles Apart: Biodiversity and Biogeography of Sea Ice Bacteria	JT Staley, JJ Gosink	53:189-215
Genetics and Physiology		
Mechanisms for the Prevention of Damage to DNA in Spores of <i>Bacillus</i> Species	P Setlow	49:29-54
Genetics, Physiology, and Evolutionary Relationships of the Genus <i>Buchnera</i> : Intracellular Symbionts of Aphids	P Baumann, L Baumann, C-Y Lai, D Rouhbakhsh, NA Moran, MA Clark	49:55-94
The Structure and Replication of Kinetoplast DNA	TA Shapiro, PT Englund	49:117-43
Polyketide Synthase Gene Manipulation: A Structure-Function Approach in Engineering Novel Antibiotics	CR Hutchinson, I Fujii	49:201-38
Nitrogenase Structure and Function: A Biochemical-Genetic Perspective	JW Peters, K Fisher, DR Dean	49:335-66
Conjugative Transposition	JR Scott, GG Churchward	49:367-97
Leucine-Responsive Regulatory Protein: A Global Regulator of Gene Expression in <i>E. coli</i>	EB Newman, R Lin	49:747-75
Molecular Biology of Mycoplasmas	K Dybvig, LL Voelker	50:25-57
Osmoadaptation by Rhizosphere Bacteria	KJ Miller, JM Wood	50:101-36
Cobalamin (Coenzyme B ₁₂): Synthesis and Biological Significance	JR Roth, JG Lawrence, TA Bobik	50:137-81
Microbial Hydrolysis of Polysaccharides	RAJ Warren	50:183-212
The Biochemistry and Genetics of Capsular Polysaccharide Production in Bacteria	IS Roberts	50:285-315
What Size Should a Bacterium Be? A Question of Scale	AL Koch	50:317-48
Breaking and Entering: Host Penetration by the Fungal Rice Blast Pathogen <i>Magnaporthe grisea</i>	RJ Howard, B Valent	50:491-512
Spontaneous Mutators in Bacteria: Insights into Pathways of Mutagenesis and Repair	JH Miller	50:625-43
rRNA Transcription and Growth Rate-Dependent Regulation of Ribosome Synthesis in <i>Escherichia coli</i>	RL Gourse, T Gaal, MS Bartlett, JA Appleman, W Ross	50:645-77

Cell Biology of the Primitive Eukaryote <i>Giardia lamblia</i>	FD Gillin, DS Reiner, JM McCaffery	50:679-705
Bacterial Heavy Metal Resistance: New Surprises	S Silver, LT Phung	50:753-89
The F ₀ F ₁ -Type ATP Synthases of Bacteria: Structure and Function of the F ₀ Complex	G Deckers-Hebestreit, K Altendorf	50:791-824
Hemoglobin Metabolism in the Malaria Parasite <i>Plasmodium falciparum</i>	SE Francis, DJ Sullivan Jr, DE Goldberg	51:97-123
Getting Started: Regulating the Initiation of DNA Replication in Yea	WM Toone, BL Aerne, BA Morgan, LH Johnston	51:125-49
Making and Breaking Disulfide Bonds Against All Odds: The Survival Strategies of <i>Deinococcus radiodurans</i>	S Raina, D Missiakas	51:179-202
Transcriptional Control of the <i>Pseudomonas</i> TOL Plasmid Catabolic Operans is Achieved Through an Interplay of Host Factors and Plasmid-Encoded Regulators	JR Battista	51:203-24
Safe Haven: The Cell Biology of Nonfusogenic Pathogen Vacuoles	JL Ramos, S Marqués, KN Timmis	51:341-73
Transcription of Protein Coding Genes in Trypanosomes by RNA Polymerase I	AP Sinai, KA Joiner	51:415-62
Clues and Consequences of DNA Bending in Transcription	L Van der Ploeg, MGS Lee	51:463-89
Regulation of Acetate Metabolism by Protein Phosphorylation in Enteric Bacteria	V de Lorenzo, J Pérez-Martín	51:593-628
Something from Almost Nothing: Carbon Dioxide Fixation in Chemoautotrophs	AJ Cozzone	52:127-64
The Anti-Sigma Factors	JM Shively, G van Keulen, WG Meijer	52:191-230
Metabolic Changes of the Malaria Parasite During the Transition from the Human to the Mosquito Host	KT Hughes, K Mathee	52:231-86
Aging in <i>Saccharomyces cerevisiae</i>	N Lang-Unnasch, AD Murphy	52:561-90
Cooperative Organization of Bacterial Colonies: From Genotype to	D Sinclair, K Mills, L Guarente	52:533-60
	DL Gutnick, E Ben-Jacob, I Cohen	52:779-806

Surface Receptors and Transporters of <i>Trypanosoma Brucei</i>	P Borst, AH Fairlamb	52:745-78
DNA Uptake in Bacteria	D Dubnau	53:217-44
Integrating DNA: Transposases and Retroviral Integrases	L Haren, B Ton-Hoang, M Chandler	53:245-81
Circadian Rhythms in Cyanobacteria:		
Adaptiveness and Mechanism	CH Johnson, SS Golden	53:389-409
Giant Viruses Infecting Algae	JL Van Etten, RH Meints	53:447-94
Mechanisms for Redox Control of Gene Expression	CE Bauer, S Elsen, TH Bird	53:495-523
Intercellular Signaling During Fruiting-Body Development of <i>Myxococcus xanthus</i>	LJ Shimkets	53:525-49

Immunology

Polyketide Synthase Gene Manipulation:		
A Structure-Function Approach in Engineering Novel Antibiotics	CR Hutchinson, I Fujii	49:201-38
The HIV-1 Rev Protein	VW Pollard, MH Malim	52:491-532

Morphology, Ultrastructure, and Differentiation

The Structure and Replication of Kinetoplast DNA	TA Shapiro, PT Englund	49:117-43
The Mechanisms of <i>Trypanosoma cruzi</i> Invasion of Mammalian Cells	BA Burleigh, NW Andrews	49:175-200
Nitrogenase Structure and Function:		
A Biochemical-Genetic Perspective	JW Peters, K Fisher, DR Dean	49:335-66
How Bacteria Sense and Swim	DF Blair	49:489-522
Leucine-Responsive Regulatory Protein:		
A Global Regulator of Gene Expression in <i>E. coli</i>	EB Newman, R Lin	49:747-75
Cell Polarity and Morphogenesis in Budding Yeast	K Madden, M Snyder	52:687-744

Organismic Microbiology

Toward a Unified Evolutionary Genetics of Microorganisms	M Tibayrenc	50:401-29
The β -Ketoadipate Pathway and the Biology of Self-Identity	CS Harwood, RE Parales	50:553-90

- Lessons from a Cooperative, Bacterial-Animal Association: The *Vibrio fischeri*-*Euprymna scolopes* Light Organ Symbiosis EG Ruby 50:591-624
- Xenorhabdus* and *Photorhabdus* spp.: Bugs That Kill Bugs S Forst, N Boemare, B Dowds, E Stackebrandt 51:47-72

- Thinking about Bacterial Populations as Multicellular Organisms JA Shapiro 52:81-104
- Bacteria as Modular Organisms JH Andrews 52:105-26
- Anaerobic Growth of a "Strict Aerobe" (*Bacillus subtilis*) MM Nakano, P Zuber 52:165-90
- Thymine Metabolism and Thymineless Death in Prokaryotes and Eukaryotes SI Ahmad, SH Kirk, A Eisenstark 52:591-625

Pathogenesis and Control

- The Pathogenesis of Tuberculosis GAW Rook, R Hernandez-Pando 50:259-84
- Will the Real Agent of Cat-Scratch Disease Please Stand Up? RC Jerri, RL Regnery 50:707-25
- Intracellular Antibodies (Intrabodies) for Gene Therapy of Infectious Diseases I Rondon, W Marasco 51:257-83
- Interaction of Antigens and Antibodies at Mucosal Surfaces ME Lamm 51:311-40
- Nosocomial Outbreaks/Pseudo-Outbreaks Due to Nontuberculous Mycobacteria RJ Wallace Jr, BA Brown, DE Griffith 52:453-90
- Tour de Paclitaxel: Biocatalysis for Semi-Synthesis of Paclitaxel RN Patel 52:361-95
- Virulence Genes of *Clostridium Perfringens* JI Rood 52:333-60

Physiology, Growth, and Nutrition

- Mechanisms for the Prevention of Damage to DNA in Spores of *Bacillus* Species P Setlow 49:29-54
- Physiological Implications of Sterol Biosynthesis in Yeast LW Parks, WM Casey 49:95-116
- How *Salmonella* Survive Against the Odds JW Foster, MP Spector 49:145-74
- Nonopsonic Phagocytosis of Microorganisms I Ofek, J Goldhar, Y Keisari, N Sharon 49:239-76
- CO Dehydrogenase JG Ferry 49:305-33
- The Regulation of Methane Oxidation in Soil RL Mancinelli 49:581-605

Virology

Environmental Virology: From Detection of Virus in Sewage and Water by Isolation to Identification by Molecular Biology—A Trip Over 50 Years	TG Metcalf, JL Melnick, MK Estes	49:461–87
Development and Application of Herpes Simplex Virus Vectors for Human Gene Therapy	JC Glorioso, NA DeLuca, DJ Fink	49:675–710
Viral Vectors in Gene Therapy	AE Smith	49:807–38
Live Attenuated Varicella Vaccine	AM Arvin, AA Gershon	50:59–100
Immunopathogenesis of HIV Infection	G Pantaleo, AS Fauci	50:825–54
RNA Virus Mutations and Fitness for Survival	E Domingo, JJ Holland	51:151–78
Genetics of the Rotaviruses	RF Ramig	51:225–55
Regulators of Apoptosis on the Road to Persistent Alphavirus Infection	DE Griffin, JM Hardwick	51:565–92
Virocrine Transformation: The Intersection Between Viral Transforming Proteins and Cellular Signal Transduction Pathways	D DiMaio, C-C Lai, O Klein	52:397–421
How Do Animal DNA Viruses Get to the Nucleus?	H Kasamatsu, A Nakanishi	52:627–86

